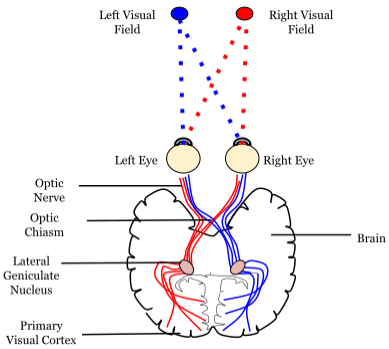
Neural pathway

In neuroanatomy, a **neural pathway** is the connection formed by axons that project from neurons to make synapses onto neurons in another location, to enable neurotransmission (the sending of a signal from one region of the nervous system to another). Neurons are connected by a single axon, or by a bundle of axons known as a nerve tract, or fasciculus.[1] Shorter neural pathways are found within grey matter in the brain, whereas longer projections, made up of myelinated axons, constitute white matter.



A neural pathway connects one part of the nervous system to another using bundles of axons called tracts. The optic tract that extends from the optic nerve is an example of a neural pathway because it connects the eye to the brain; additional pathways within the brain connect to the visual cortex.

In the hippocampus there are neural pathways involved in its circuitry including the perforant pathway, that provides a connectional route from the entorhinal cortex[2] to all fields of the hippocampal formation, including the dentate gyrus, all CA fields (including CA1),[3] and the subiculum.

Descending motor pathways of the pyramidal tracts travel from the cerebral cortex to the brainstem or lower spinal cord.[4][5] Ascending sensory tracts in the dorsal column–medial lemniscus pathway (DCML) carry information from the periphery to the cortex of the brain.

Naming

Functional aspects

Basal ganglia pathways and dopamine

Major neural pathways

See also

References

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